

AMSAT News Service Weekly Bulletins

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AMSAT NEWS SERVICE

ANS-096

The AMSAT News Service bulletins are a free, weekly news and information service of AMSAT North America, The Radio Amateur Satellite Corporation. ANS publishes news related to Amateur Radio in Space including reports on the activities of a worldwide group of Amateur Radio operators who share an active interest in designing, building, launching and communicating through analog and digital Amateur Radio satellites.

The news feed on <http://www.amsat.org> publishes news of Amateur Radio in Space as soon as our volunteers can post it.

Please send any amateur satellite news or reports to:
ans-editor at amsat.org.

You can sign up for free e-mail delivery of the AMSAT News Service Bulletins via the ANS List; to join this list see:
<http://www.amsat.org/mailman/listinfo/ans>

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ANS-096 AMSAT News Service Weekly Bulletins

AMSAT News Service Bulletin 096.01

>From AMSAT HQ KENSINGTON, MD.

DATE YYYY

To All RADIO AMATEURS

BID: \$ANS-096.01

AMSAT India AISAT APRS Payload Operational on 145.825 MHz

An APRS payload from AMSAT INDIA was successfully launched on April 1, 2019 at 03:57 GMT on the PSLV-C45 mission. The payload was powered up on schedule over Sweden, Norway, Denmark, Finland, Poland and Moscow. AMSAT India requested stations at these locations to report the first signals on 145.825 MHz from the payload.

The first beacon from AISAT-1 was received by R4UAB and DK3WN was able to digipeat through the satellite. Mike posted information on his blog at: <http://www.dk3wn.info/p/?p=94180>

AMSAT India requests that the Amateur Radio fraternity worldwide use

the payload and Satgates to feed the traffic.

More details about this unique project as well as the pre-launch TLE are available at <http://www.amsatindia.org/> Their twitter feed is at <https://twitter.com/amsatindia> AMSAT Argentina's web-based satellite pass page passes at <http://amsat.org.ar/pass?satx=aisa1> provides useful tracking information based on the pre-launch TLE.

The 4th stage of the PSLV rocket (PS4) will become an orbital platform in a 485 km orbit hosting three payloads:

- + Automatic Packet Reporting System (APRS) digipeater from AMSAT INDIA
- + Automatic Identification System (AIS) from ISRO
- + Advanced Retarding Potential Analyzer for Ionospheric Studies (ARIS) from the Indian Institute of Space Science and Technology (IIST).
<https://www.isro.gov.in/launcher/pslv-c45-emisat-mission>

[ANS thanks Nitin, VU3TYG, Secretary, AMSAT INDIA for the above information]

AMSAT relies on your donations to Keep Amateur Radio in Space. Please consider a donation to the AMSAT General Fund, the GOLF Program, or ARISS today at <https://www.amsat.org/donate/>

Upcoming Satellite Operations

Defrosting Trip (EM90, EL99) – April 7-9, 2019

Paul, KE0PBR, has plans to escape the Land of the 10,000 Frozen Lakes and head down to Florida, to enjoy a little Global Warming. Will most likely be FM only, and holiday style. Paul will post announcements on his Twitter account: <https://twitter.com/KE0PBR>

Utah (DM37, DM48, DM58) – April 13-19, 2019

Bob, N6REK, will be roving in Utah from April 13 to the 19th. He plans to be in DM37 April 13, DM58 from April 14-17, and then DM48 from April 17-19. Bob will be FM satellites only, and he will post the specific passes on the amsat-bb when we get closer to those dates.

Liechtenstein (JN47) – April 17-19, 2019

Phillippe, EA4NF, is off on another DXpedition. This time, he is heading to HB0/Lichtenstein. Phillippe will operate under the call sign HB0/EA4NF from Leichtenstein and HB9/EA4NF from Switzerland (JN47s, on both FM and SSB satellites. QSL via LoTW. Updated info & Pass announcements (Time+Frequencies) available on Twitter: https://twitter.com/EA4NF_SAT

Northern Border Security Check (Minnesota to Washington) – April 29 to May 4 or 5th, 2019 Alex, N7AGF, is all set for his semiannual rover trip to activate rare and somewhat rare grids, from April 29th to May 4th or 5th (or longer depending on how things go). Alex will fly into Minneapolis and drive back to my home grid CN88, activating as many ENx8, ENx7, DNx8, and DNx7 grids as possible along the route. The hope is to hit many corners and lines. Alex will be on both linear and FM birds. As always, activations and route details will be posted to his Twitter @N7AGF at <https://twitter.com/N7AGF> Alex will also be on APRS at <https://aprs.fi/N7AGF-10> In areas of limited cell service, he'll be using inReach.

Please submit any additions or corrections to ke4al (at) amsat.org

[ANS thanks KE4AL for the above information]

UT1FG/MM QSL Procedure Announced

Yuri, UT1FG/mm, is headed to Kalningrad (UA2) and according to marinetraffic.com, he will be there around 16April. Yuri will leave the ship there and go on vacation until next season.

Yuri would like those who want to confirm their contacts, to do so by following the procedure to create a .pdf file that he can print, confirm and mail out from Kaliningrad. Instructions for creating the .pdf file are on papays.com/sat Please do not forget to include your mailing address in the header per the example.

He would like to receive the qsl logsheets about one week before he arrives in port. You can send them to me later than that, but he may not have time to process them as he approaches port. That decision is up to you. I will forward them to Yuri as long as he is still underway. Send your logsheets to my qrz.com email address.

Yuri was in HL90 on the 1818z 04April pass of A0-7.

[ANS thanks John Papay, K8YSE for the above information]

Hamvention Booth Announcement

Join us as AMSAT celebrates our Golden Jubilee at the 2019 Hamvention with a 1969 theme and an "OSCAR Park" display. The satellite lineup includes appearances by OSCAR-1, A0-7, Phase-3A, ARISSat, Fox, and GOLF. Join up or renew your AMSAT membership. Updated for 2019, AMSAT's book, "Getting Started With Amateur Satellites" is available. Get one-on-one guidance on setting up your satellite station and making contacts at our "Beginner's Corner". Participate in live demonstrations of contacts through FM and linear satellites with station and operating tips from some of the best satellite operators in the country.

[ANS thanks the AMSAT Hamvention Team for the above information]

AMSAT Activities at Hamvention 2019

For a complete list of AMSAT activities at the 2019 Hamvention, see www.amsat.org/other-events/amsat-activities-at-hamvention-2019/ Below, two of these activities are highlighted:

AMSAT Forum, Forum Room 2
Saturday, 18 May 2019, 12:10 – 13:40 EDT
Moderated by Robert Bankston KE4AL, AMSAT Vice President–User Services

AMSAT Status Report – Joseph Spier, K6WA0, AMSAT President, will highlight recent activities within AMSAT and discuss some of our challenges, accomplishments, projects, and any late breaking news.

AMSAT Engineering – Jerry Buxton, N0JY, AMSAT Vice President–Engineering, will talk about the Fox-1 and Golf (Greater Orbit, Larger Footprint) Projects.

AMSAT Education – Alan Johnston, KU2Y, AMSAT Vice President–Educational Relations will introduce the AMSAT CubeSat Simulator.

AMSAT User Services – Robert Bankston, KE4AL, AMSAT Vice President–User Services, will discuss AMSAT’s 50th Anniversary Operating Event and the new AMSAT Ambassadors Program.

Amateur Satellite Demonstrations

Outside Main Entrance – Maxim Hall (Building 1)

Friday, Saturday, Sunday 16 – 19 May 2019, 08:00 – 16:30 EDT

Amateur Satellite operation demonstrations will be held outside the main Maxim Hall (Building 1 or E1) entrance. Every day, AMSAT will be demonstrating actual contacts with the operational amateur satellites. We especially want to invite youth to make a contact via an amateur satellite. All are invited to observe, participate and ask questions. Satellite pass times will be posted at the AMSAT booth (1007-1010 & 1107-1110) and in the demo area.

[ANS thanks AMSAT for the above information]

The Case of the Unknown Satellites

On December 3, 2018, a SpaceX Falcon 9 rocket took off from California, lofting the largest haul of individual satellites the vehicle had ever transported. All 64 satellites deployed into space as designed. But nearly four months later, more than a dozen satellites from the launch have yet to be identified in space. We know that they’re up there, and where they are, but it’s unclear which satellites belong to which satellite operator on the ground. They are, truly, unidentified flying objects.

An article by Loren Grush details the difficulties presented to the Air Force in sorting out objects from multiple launches.

To read the full article, see <https://tinyurl.com/y6rgkfn6>

[ANS thanks The Verge for the above information]

Upcoming ARISS Contacts

58th Hamilton Scout Group, Stoney Creek, Ontario, Canada, direct via VE3DC

The ISS callsign is presently scheduled to be NA1SS

The scheduled astronaut is David St-Jacques KG5FYI

Contact is go for: Sat 2019-04-06 18:31:06 UTC 38 deg

Shaftesbury High School, Winnipeg, Manitoba, Canada, telebridge via VK6MJ

The ISS callsign is presently scheduled to be NA1SS

The scheduled astronaut is David St-Jacques KG5FYI

Contact is go for: Wed 2019-04-10 15:57:13 UTC 37 deg

École des Charmilles, Thyez, France, telebridge via 0N4ISS

The ISS callsign is presently scheduled to be 0R4ISS

The scheduled astronaut is David St-Jacques KG5FYI

Contact is go for: Thu 2019-04-11 12:55:18 UTC 64 deg

Listen for the ISS on the downlink of 145.80 MHz. ARISS is always glad to receive listener reports for the above contacts. ARISS thanks

everyone in advance for their assistance. Feel free to send your reports to [aj9n\(a\)amsat.org](mailto:aj9n(a)amsat.org) or [aj9n\(a\)aol.com](mailto:aj9n(a)aol.com).

[ANS thanks Charlie Sufana, AJ9N for the above information]

International Space Station Astronauts are Calling CQ Students

The Amateur Radio on the International Space Station (ARISS) program is seeking proposals from April 1, through May 15, 2019, from US schools, museums, science centers and community youth organizations (working individually or together) to host radio contacts with an orbiting crew member aboard the International Space Station (ISS) between January 1, 2020 and June 30, 2020.

Each year, ARISS provides tens of thousands of students with learning opportunities about space technologies, communications, and much more through the exploration of Amateur Radio and space. The ARISS program connects students to astronauts on the ISS through a partnership between NASA, the Radio Amateur Satellite Corporation, the American Radio Relay League, other Amateur Radio global organizations and the worldwide space agencies. The program's goal is to inspire students to pursue interests and careers in science, technology, engineering, and mathematics (STEM) and in Amateur Radio.

Educators report regularly that student participation in the ARISS program stimulates interest in STEM subjects and STEM careers. One educator wrote, "Many of the middle school students who took part in and attended the ARISS contact have selected science courses in high school as a result of that contact." Educators are setting up ham radio clubs in schools and learning centers because of students' interest.

ARISS is looking for organizations that will draw large numbers of participants and integrate the contact into a well-developed, exciting education plan. Students can learn about satellite communications, wireless technology, science research conducted on the ISS, radio science, and other STEM subjects. Students learn to use Amateur Radio to talk directly to an astronaut and ask their STEM-related questions. ARISS will help educational organizations locate Amateur Radio groups who can assist with equipment for a once-in-a-lifetime opportunity for students.

The proposal window opens April 1, 2019 and the proposal deadline is May 15, 2019. For proposal guidelines and forms and more details, go to: <http://ariss-proposal-webinar-spring-2019.eventbrite.com>

Proposal webinars for guidance and getting questions answered will be offered April 11, 2019 at 7 pm Eastern Time and April 16, 2019 at 9 pm Eastern Time. Advance registration is necessary. To sign up, go to <https://ariss-proposal-webinar-spring-2019.eventbrite.com>

[ANS thanks Charlie Sufana, AJ9N for the above information.]

VUCC Awards-Endorsements for March 2019

Here are the endorsements and new VUCC Satellite Awards issued by the ARRL for the period March 1, 2019 through April 1, 2019. Congratulations to all those who made the list this month!

CALL 01 Mar 01 Apr

WI7P 835 858
N4UF0 729 730
AA8CH 451 500
N3GS 370 409
K9U0 225 265
N6RFM 201 226
WW8W 152 181
PU8RFL 151 157
PS8MT 150 156
K5CIS New 150
K4RGK 133 145
LW2DAF 115 120
KF0QS New 115
KJ4EU 100 101
PP2CC New 101
AD7DB New 100
N7AME New 100

[ANS thanks Ron Parsons, W5RKN for the above information]

Raspberry Pi magazine MagPi Features Ham Radio

The Raspberry Pi magazine MagPi issue 80 is an Amateur Radio Special that features articles by Dave Honess M6DNT and Rob Zwetsloot. The PDF is available free.

The amateur radio articles appear on pages 62-75:

- . Pictures from Space via Ham Radio - Have you ever wanted to receive a radio signal from space? It's fun and a lot easier than you might think!
- . What is Ham Radio?
- . Using Ham Radio with Raspberry Pi
- . Amazing Ham Radio Projects - 7 projects

Download the Free MagPi magazine issue 80 PDF at
<https://www.raspberrypi.org/magpi/issues/80/>

The MagPi editorial team say - Got an amazing ham radio project of your own? Tweet us your photos! @TheMagPi

Previous issues of MagPi are at
<https://www.raspberrypi.org/magpi/issues/>

[ANS thanks raspberrypi.org for the above information]

Satellite Shorts From All Over

- + AMSAT has filed comments in the FCC Orbital Debris Mitigation Proceeding. For details, see ANS special bulletin 095 or visit:
<https://tinyurl.com/yywq5jyt>
- + From precision GPS to batteries for one of the world's first commercial all-electric airplanes, NASA technology turns up in nearly every corner of modern life. The latest edition of NASA's Spinoff publication features dozens of commercial technologies that were developed or improved by the agency's space program and benefit people everywhere. The publication provides nearly 50 examples of how NASA benefits various industries and people around the world. Print and digital versions of the latest issue of Spinoff are avail-

able at: <https://spinoff.nasa.gov/Spinoff2019/index.html>
(ANS thanks NASA HQ News for the above information)

- + XLGTa is a new Excel app which can calculate the antenna Gain/Temperature ratio, similar to the TANT program but with many more features. It can read 3D pattern data generated by EZNEC, AutoEZ, 4nec2, A.M. (Teri Software Antenna Model), or MMANA-GAL. In addition to G/Ta the app will calculate Average Gain, RDF (aka Directivity), and DMF (aka Rear Hemisphere Mean Sidelobe Level). XLGTa is free but requires Excel 2000 or later. For complete details and downloads see: <https://ac6la.com/xlgt.html>
(ANS thanks Dan, AC6LA, for the above information)
- + Rocket Lab Electron launch vehicle successfully lifted the R3D2 satellite for DARPA from Launch Complex 1 on New Zealand's Mahia Peninsula at 23:27, March 28th UTC (12:27, 29 March NZDT). The mission launched a prototype reflect array antenna to orbit for the Defense Advanced Research Projects Agency.
(ANS thanks satmagazine.com for the above information)
- + Lockheed Martin has announced a new generation of space technology that will launch this year that will allow satellites to change their missions in orbit. This new tech, called SmartSat, is a software-defined satellite architecture that will boost capability for payloads on several testbed satellites.
(ANS thanks satmagazine.com for the above information)
- + The Northern Arizona DX Association will celebrate the 50th anniversary of landing men on the moon with the special callsign K7M from various locations including the the "Meteor Crater National Natural Landmark" where astronaut training took place.
<http://www.nadxa.com/>
(ANS thanks DX Newsletter for the above information)
- + Congratulations to Mike, W8LID for completing his Worked All States Satellite with his AO-91 contact with RJ, WY7AA roving in South Dakota.
(W8LID via Twitter)
- + Former NASA astronauts Jim Buchli and Janet Kavandi were inducted into the U.S. Astronaut Hall of Fame Class of 2019 during a ceremony on April 6, 2019, inside the Space Shuttle Atlantis attraction at NASA's Kennedy Space Center Visitor Complex in Florida. They unveiled their plaques, which will be placed in the Hall of Fame at the visitor complex.
(ANS thanks NASA for the above information)
- + After a long process of testing and judging experiments, the European Space Agency and Raspberry Pi Foundation are happy to announce that a record number of 135 teams have been granted 'flight status' for Mission Space Lab 2018/2019! Full release at: <https://tinyurl.com/y3bdqwp3>
(ANS thanks the European Space Agency for the above information)

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In addition to regular membership, AMSAT offers membership in the President's Club. Members of the President's Club, as sustaining donors to AMSAT Project Funds, will be eligible to receive additional benefits. Application forms are available from the AMSAT Office.

Primary and secondary school students are eligible for membership at one-half the standard yearly rate. Post-secondary school students enrolled in at least half time status shall be eligible for the student rate for a maximum of 6 post-secondary years in this status. Contact Martha at the AMSAT Office for additional student membership information.

73 and Remember to help keep amateur radio in space,
This week's ANS Editor,

K0JM at amsat dot org